

**STUDENT ACTIVITY 5.1-5.2: CONNECT DEVICES AND UNDERSTAND STORAGE**

MTA Course: 10753 Windows Operating System Fundamentals

Topic: Connect devices; understand storage

File name: 10753\_WindowsOS\_SA\_5.1-5.2

**Lesson Objectives:**

**5.1:** Connect devices. *This objective may include but is not limited to:* connecting plug-and-play devices, connecting and disconnecting printers, installing third-party software for devices.

**5.2:** Understand storage. *This objective may include but is not limited to:* understanding disk types (NTFS, FAT, etc.), security (encryption), storage device types (eSATA, USB, USB 2.0, IEEE 1394, iSCSI), storage drive types (basic, primary, extended, logical, dynamic disk, VHDs), and cloud storage (Windows Live SkyDrive, OneNote to SkyDrive, Live mesh).

**Resources, software, and additional files needed for this lesson:**

- A workstation with Windows 7 Professional or Enterprise edition installed
- Alternative option:
  - A virtual machine with Windows 7 Professional or Enterprise edition installed

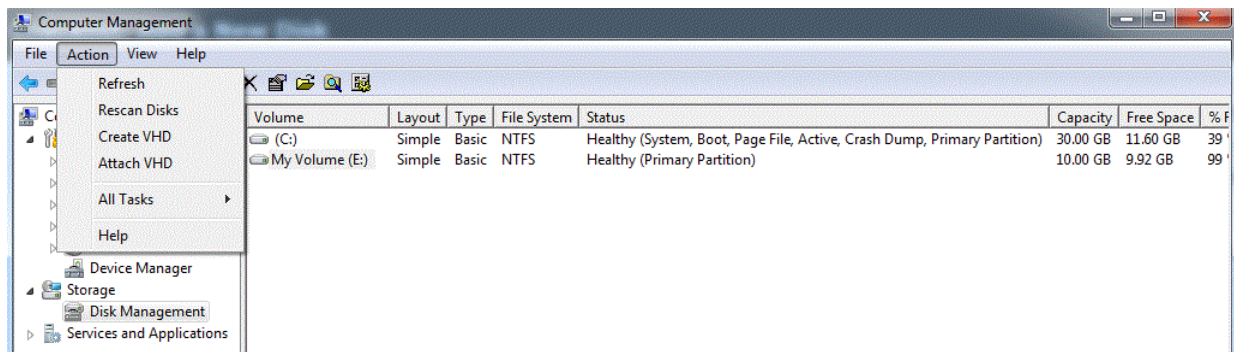
**Directions to the student:**

Complete the following hands-on activities. Note that the screenshots in the activity may look different from your system. Answer the questions as you work through the activities. You will be asked to work with a partner during this activity. Verify your answers with the instructor.

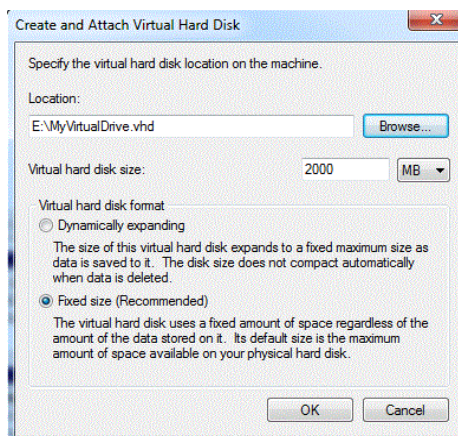
**Creating, attaching, and extending a virtual hard disk**

1. Authenticate into your system using the account credentials provided by your instructor.
2. Open the Computer Management console by clicking Start, typing **Computer Management** in the Search Programs And Files box, and pressing ENTER.
3. Expand the Storage option in the left pane.
4. Click Disk Management.

- Click the Action menu item and select Create VHD, as shown here.

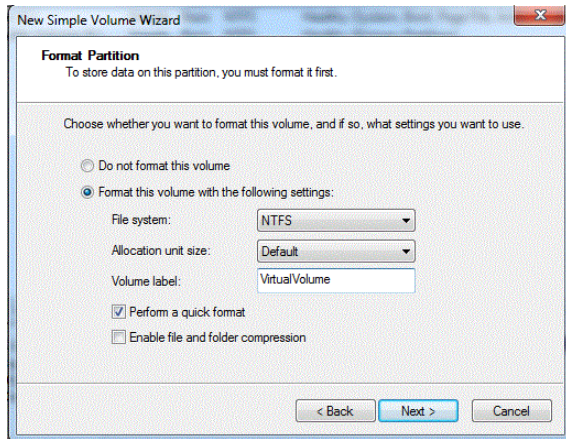


- Browse to the secondary volume, name the virtual hard disk (VHD) **MyVirtualDrive**, set the Virtual Hard Disk size to 2000 MB, as shown here, and click OK.



- After the virtual hard disk is created, it will be displayed as Unknown. Right-click the disk and select Initialize Disk. This is necessary for the Logical Disk Manager to access it.
- Confirm that you have the correct disk selected in the Initialize Disk screen. Click OK.
- Right-click in the Unallocated space and select New Simple Volume.
- Click Next on the Welcome page of the New Simple Volume Wizard.
- Enter **1000 MB** for the simple volume size and click Next.
- Accept the default drive letter and click Next.

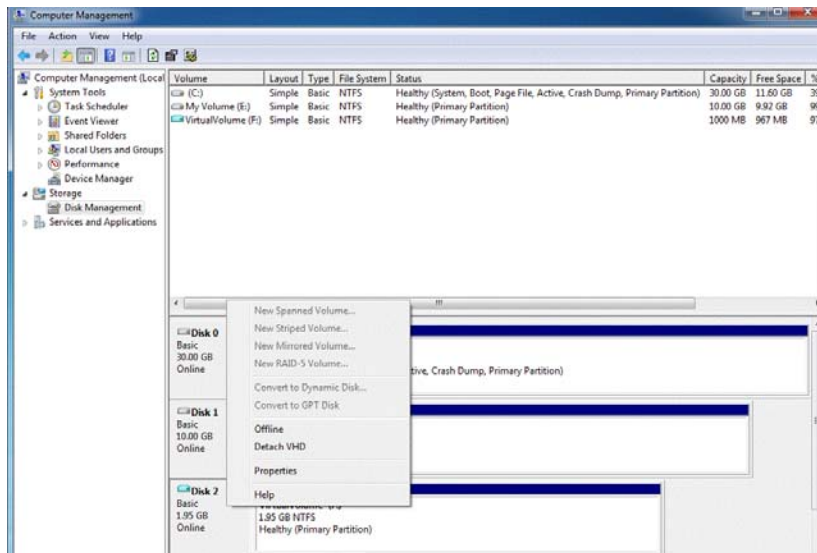
13. Perform a quick format of the partition using the NTFS for the file system type. Type **VirtualVolume** in the volume label box, as shown here. Click Next.



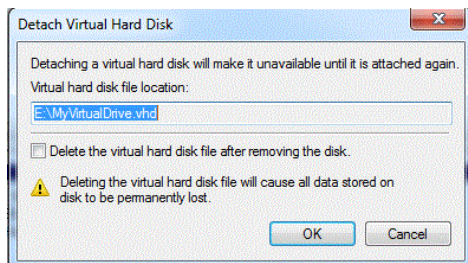
14. Confirm the settings and click Finish.
15. Once VirtualVolume is created, an AutoPlay dialog box is displayed, prompting the user to open the folder to view the files. Close the dialog box.
16. Right-click the new volume and select Shrink Volume.
17. What is the size of available shrink space in MB?
- a. \_\_\_\_\_
18. Click Cancel.
19. Right-click the new volume and select Extend Volume.
20. Click Next on the Welcome screen of the Extend Volume Wizard.
21. What is the maximum available space in MB?
- a. \_\_\_\_\_
22. Accept the default setting and click Next.
23. Confirm the settings and click Finish.
24. Close Computer Management.
25. Open Windows Explorer by clicking the Explorer icon on the taskbar.
26. Navigate to the secondary volume and locate the file named MyVirtualDrive.
27. What is the size of this file?
- a. \_\_\_\_\_
28. What does this file represent?
- a. \_\_\_\_\_
29. Have the instructor verify that you have successfully created a VHD.

## Detach and remove a virtual hard disk

1. Open Computer Management again and navigate to Disk Management.
2. Right-click your VHD and select Detach VHD, as shown here.



3. Click OK in the Detach Virtual Hard Disk window, as shown here. This will allow you to copy MyVirtualDrive.vhd and attach it to another system. Note: you have the option to delete this file from the disk, and any data on the virtual hard disk will be deleted as well.



4. Verify that the VHD file is still located on the secondary volume.
5. Delete the VHD from the secondary volume.
6. Have the instructor verify your answers.